

CLAIMS:

1. An audio transmission system comprising: a decoder for converting a frame organized input bitstream into an audio output representation; and a bad frame processing means arranged for detecting bad frames in the bitstream; characterized in that the audio transmission system further comprises a pitch period estimator coupled to said audio output
5 for estimating the pitch period of the audio representation; and that the pitch period estimator is further coupled to the bad frame processing means for replacing the audio output during a detected bad frame by a repeat part, which is synchronous to the estimated pitch period.
2. The audio transmission system according to claim 1, characterized in that the
10 bad frame processing means comprise bitstream buffer means containing a representation of the previous input bitstream.
3. The audio transmission system according to claim 2, characterized in that the
15 bitstream buffer means comprise indexing means providing a buffer read index, whose value is related to the estimated pitch period for selecting the repeat part from the representation which is stored in the bitstream buffer means.
4. The audio transmission system according to one of the claims 1-3,
20 characterized in that the decoder is a Pulse Code Modulator, in particular a Differential PCM decoder and/or an Adaptive DPCM decoder.
5. The audio transmission system according to one of the claims 1-4,
characterized in that the bad frame processing means comprises a bad frame detector.
- 25 6. The audio transmission system according to claim 5, characterized in that the bad frame detector is arranged to perform a Cyclic Redundancy Check (CRC).

7. The audio transmission system according to one of the preceding claims embodied as a communication device, such as a telephone device, a speech device, a voice device or the like.

- 5 8. A method for converting a frame organized bitstream into an audio output representation, wherein bad frames are detected in the bitstream, characterized in that a pitch period of the audio output is being measured, and that the pitch period is used as a measure for determining the length of a previous audio output representation, which is at least partly used for replacing said audio output during detection of the bad frame.